

> d his full

(FILE 'HOME' ENTERED AT 11:47:58 ON 27 JUN 2003)

FILE 'REGISTRY' ENTERED AT 11:48:44 ON 27 JUN 2003

E 3-ISOTHIAZOLONE/CN

L1 1 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE/CN  
D L1

FILE 'CAPLUS' ENTERED AT 11:49:44 ON 27 JUN 2003

L2 251 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE

L3 313 SEA ABB=ON PLU=ON L1

FILE 'REGISTRY' ENTERED AT 11:50:25 ON 27 JUN 2003

E POLYHEXAMETHYLENEBIGUANIDINE/CN

E POLYHEXAMETHYLENEGUANIDINE/CN

L4 1 SEA ABB=ON PLU=ON POLYHEXAMETHYLENEGUANIDINE/CN  
D L4

FILE 'CAPLUS' ENTERED AT 11:51:28 ON 27 JUN 2003

L5 92 SEA ABB=ON PLU=ON L4

L6 1 SEA ABB=ON PLU=ON L4 (P) (PHOSPHATE OR PHOSPHORIC) (5A)  
SALT

D L6 IBIB KWIC

L7 0 SEA ABB=ON PLU=ON L3 AND L5

L8 51 SEA ABB=ON PLU=ON (L3 OR L5) (P) (ANTIBACTERIAL OR BIOCIDAL  
OR BACTERICIDAL OR FUNGICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL  
OR ANTIMICROBIAL)

L9 4 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY  
OR ADDITIVE) (P) (L3 OR L5)

L10 10 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY  
OR ADDITIVE) (P) (ANTIMICROBIAL OR ANTIBACTERIAL OR ANTIFUNGAL  
OR BIOCIDAL OR BACTERICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL)

D 10 IBIB KWIC 1-

D L8 IBIB 1-

L11 11 SEA ABB=ON PLU=ON (POLYHEXAMETHYLENEGUANIDINE) AND (SALT OR  
DERIVATIVE) (P) (PHOSPHATE OR PHOSPHORIC OR PHOSPHOROUS)

D L11 IBIB KWIC 1-

L17 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:618102 CAPLUS

DOCUMENT NUMBER: 123:17526

TITLE: Cosmetic and pharmaceutical compositions containing antimicrobial phosphate esters

INVENTOR(S): Nelson, Dennis George Anthony; Hayes, Jeffrey Charles

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: PCT Int. Appl., 18 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
WO 9508920	A1	19950406	WO 1994-US10534	19940916
W: CA, CN, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 721300	A1	19960717	EP 1994-929236	19940916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
CN 1132467	A	19961002	CN 1994-193614	19940916
JP 09502998	T2	19970325	JP 1994-510343	19940916
PRIORITY APPLN. INFO.:			US 1993-129533	19930929
			WO 1994-US10534	19940916

OTHER SOURCE(S): MARPAT 123:17526

IT 55-56-1D, **Chlorhexidine, phosphate** esters 67651-57-4

RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(cosmetic and pharmaceutical compns. contg. antimicrobial phosphate esters)

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:116050 CAPLUS

DOCUMENT NUMBER: 128:132286

TITLE: Buccal solutions for teeth and mouth care containing  
chlorhexidine salts

INVENTOR(S): Cardon, Chris

PATENT ASSIGNEE(S): Cardon, Chris, Belg.

SOURCE: Eur. Pat. Appl., 5 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
EP 815832	A2	19980107	EP 1997-870096	19970701
EP 815832	A3	19980902		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BE 1010402	A6	19980707	BE 1996-605	19960701
PRIORITY APPLN. INFO.:			BE 1996-605	19960701
AB Buccal solns. for teeth and mouth care contg. <b>chlorhexidine</b> <b>salts</b> , zinc chloride, <b>phosphates</b> and fluorides are claimed (no data).				

## WEST Search History

DATE: Friday, June 27, 2003

<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side			result set
	<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=OR</i>		
L11	(polyhexamethyleneguanidine) same (salt or derivative) same (phosphoric or phosphate or pohosphonate or phosphorus)	0	L11
L10	(polyhexamethyleneguanidine or phmb or polyhexamethylenebiguanidine) same (salt or derivative) same (phosphoric or phosphate or pohosphonate or phosphorus)	12	L10
L9	polyhexamethyleneguanidine same polyhexamethylenebiguanidine	1	L9
L8	polyhexamthyleneguanidine	0	L8
L7	polyhexamthyleneguanidine same polyhexamethylenebiguanidine	0	L7
L6	(polyhexamthyleneguanidine or phmb or polyhexamethylenebiguanidine) same (salt or derivative) same (phosphoric or phosphate or pohosphonate or phosphorus)	12	L6
L5	(polyhexamthyleneguanidine or phmb or polyhexamethylenebiguanidine) same (phosphate or salt or derivative or chloride or gluconate or ester)	159	L5
L4	(polyhexamthyleneguanidine or polyhexamethylenebiguanidine) same (phosphate or salt or derivative or chloride or gluconate or ester)	15	L4
L3	(polyhexamthyleneguanidine or hexamethylenebiguanidine adj5 polymer) same (phosphate or salt or derivative or chloride or gluconate or ester)	0	L3
L2	(polyhexamthyleneguanidine or polyhexamethylenebiguanidine) adj5 (phosphate or salt or derivative or chloride or gluconate or ester)	4	L2
L1	polyhexamthylene adj5 (phosphate or salt or derivative or chloride or gluconate or ester)	0	L1

END OF SEARCH HISTORY

L8 ANSWER 19 OF 51 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:674642 CAPLUS

DOCUMENT NUMBER: 133:223537

TITLE: Antibacterial resin compositions

INVENTOR(S): Park, Heung-soo; Lee, Hyung-bum; Jung, Ho-jin

PATENT ASSIGNEE(S): Korea Chemical Co., Ltd., S. Korea

SOURCE: Repub. Korea, No pp. given

CODEN: KRXXFC

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
KR 9704205	B1	19970326	KR 1992-27237	19921231
PRIORITY APPLN. INFO.:			KR 1992-27237	1992123

L8 ANSWER 27 OF 51 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:250583 CAPLUS

DOCUMENT NUMBER: 130:321888

TITLE: Antibacterial and antifungal tatami mats and sheets  
for underlays

INVENTOR(S): Funae, Haruyoshi; Nakamura, Munetomo; Tsubakii, Yasuo

PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
JP 11107501	A2	19990420	JP 1997-271200	19971003
PRIORITY APPLN. INFO.:			JP 1997-271200	19971003

L8 ANSWER 29 OF 51 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:214277 CAPLUS

DOCUMENT NUMBER: 128:286176

TITLE: Method for enhancing biocidal activity

INVENTOR(S): Wright, J. Barry; Michalopoulos, Daniel

PATENT ASSIGNEE(S): BetzDearborn Inc., USA

SOURCE: U.S., 8 pp., Cont.-in-part of U.S. 5,607,597.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5736056	A	19980407	US 1997-783683	19970115
US 5607597	A	19970304	US 1995-431338	19950428
CA 2171235	AA	19961029	CA 1996-2171235	19960307
ES 2156613	T3	20010701	ES 1996-301835	19960318
NO 9601550	A	19961029	NO 1996-1550	19960419
WO 9831638	A1	19980723	WO 1997-US19741	19971030
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9852419	A1	19980807	AU 1998-52419	19971030
AU 725801	B2	20001019		
EP 904252	A1	19990331	EP 1997-947306	19971030
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE, FI				
JP 2000507158	T2	20000613	JP 1998-534315	19971030
ZA 9710181	A	19980528	ZA 1997-10181	19971112
NO 9804181	A	19980915	NO 1998-4181	19980911
PRIORITY APPLN. INFO.:			US 1995-431338	A2 19950428
			US 1997-783683	A 19970115
			WO 1997-US19741	W 19971030

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2003:99729 CAPLUS  
TITLE: Water-diluting composition for bactericidal covers  
INVENTOR(S): Lipovich, V. G.; Lifanov, E. V.; Sarylova, M. E.;  
Lipovich, T. V.  
PATENT ASSIGNEE(S): Petrochenko, Aleksandr Anatol'evich, Russia  
SOURCE: Russ., No pp. given  
CODEN: RUXXE7  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
RU 2189999	C2	20020927	RU 1998-109097	19980514

PRIORITY APPLN. INFO.: RU 1998-109097 19980514

AB FIELD: paint and varnish industry. SUBSTANCE: invention relates to prepg. a bactericidal cover that involves the use a bactericidal component on the base, for example, water-emulsion dyes, water glass or slaked lime. Invention relates to a water-dilg. compn. for bactericidal covers of articles made of ceramics, concrete, brick, stucco and other materials in air medium comprising a water-dilg. dye and **derivs.** of **polyhexamethyleneguanidine** as a bactericidal component. A water-dilg. compn. comprises **derivs.** of **polyhexamethyleneguanidine** as a bactericidal component of the general formula: where R is a base, chloride, **phosphate**; n = 2-60 in the following ratio of components, mas. p. p. : **derivs.** of **polyhexamethyleneguanidine**, 0.5-9; water-dilg. dye, 91-99.5. Invention provides the development of a cover with resistant bactericidal properties and showing the broad spectrum of biocide properties and safety for humans. Invention is used as bactericidal covers for industrial, stores, public, medicinal, residential compartments and constructions, in agriculture and different branches of food industry. EFFECT: improved properties of compn. 3 tbl.

L11 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:650477 CAPLUS  
DOCUMENT NUMBER: 138:124249  
TITLE: Polyalkyleneguanidine salt-containing disinfecting detergents  
INVENTOR(S): Gembitskii, P. A.; Efimov, K. M.  
PATENT ASSIGNEE(S): Regional'naya Obshchestvennaya Organizatsiya - Institut Ekologo-Tekhnologicheskikh Problem, Russia  
SOURCE: Russ., No pp. given  
CODEN: RUXXE7  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
RU 2177499	C1	20011227	RU 2000-120018	20000728

PRIORITY APPLN. INFO.: RU 2000-120018 20000728

AB A disinfecting detergent comprises a disinfectant, such as chloride or phosphate of **polyhexamethyleneguanidine** or phosphate of poly(4,9-dioxadodecanguanidine) (10-20), a mixt. of a nonionic surfactant (ethoxylated alcs.) and an ionic surfactant (sodium alkylbenzenesulfonate) (10-15%) and water, to the balance. The disinfecting detergents can be used in medicine, veterinary, food industry and for domestic purposes. Thus, a disinfecting detergent comprising **polyhexamethyleneguanidine\***  
**\*\* phosphate (15%) and a surfactant mixt. (15%) of Neonol 9-10 and**



Sulfanol was produced.

IT 57029-18-2 89697-78-9, \*\*\*Polyhexamethyleneguanidine  
phosphate 478920-03-5

RL: POF (Polymer in formulation); TEM (Technical or engineered material  
use); USES (Uses)

(polyalkyleneguanidine salt-contg. disinfecting detergents)

L11 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:636742 CAPLUS

DOCUMENT NUMBER: 137:170970

TITLE: Polyhexamethyleneguanidine salt-treated  
antibacterial fibers

INVENTOR(S): Son, Son Won; Ju, Hong Shin; Kitamura, Koji; Otsuki,  
Toru; Suyama, Tomiyoshi

PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K  
Corporation

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002235282	A2	20020823	JP 2001-75029	20010209

PRIORITY APPLN. INFO.: JP 2001-75029 20010209

TI Polyhexamethyleneguanidine salt-treated antibacterial fibers

AB Title fibers contg. no heavy metals or halogens comprise polyhexamethylene  
guanidine salt [C<sub>6</sub>H<sub>12</sub>NHC(:NH)NH]<sub>n</sub>NA, wherein n = .gtoreq.1  
integer; A = nitric acid, formic acid, acetic acid, benzoic acid,  
dehydroacetic acid, propionic acid, gluconic acid, sorbic acid, phosphoric  
acid, fumaric acid, maleic acid, carbonic acid, sulfuric acid, or  
p-toluenesulfonic acid. Thus, a cotton cloth was treated with 0.3%  
poly(hexamethylene guanidine) phosphate to give an antibacterial  
cotton cloth showing good antibacterial effect initially and after 10  
times washing.

IT Textiles

(cotton; prepn. of polyhexamethyleneguanidine salt-treated  
antibacterial fibers)

IT Polyamide fibers, uses

Polyester fibers, uses

RL: BUU (Biological use, unclassified); TEM (Technical or engineered  
material use); BIOL (Biological study); USES (Uses)

(fabrics; prepn. of polyhexamethyleneguanidine salt-treated  
antibacterial fibers)

IT Antibacterial agents

(prepn. of polyhexamethyleneguanidine salt-treated  
antibacterial fibers)

IT Fibers

RL: BUU (Biological use, unclassified); TEM (Technical or engineered  
material use); BIOL (Biological study); USES (Uses)

(prepn. of polyhexamethyleneguanidine salt-treated  
antibacterial fibers)

IT Polyamines

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(salts, antibacterial agents; prepn. of polyhexamethyleneguanidine  
salt-treated antibacterial fibers)

IT 89697-78-9, Polyhexamethylene guanidine phosphate

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)

(antibacterial agents; prepn. of polyhexamethyleneguanidine

**salt-treated antibacterial fibers)**

L11 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:499303 CAPLUS

DOCUMENT NUMBER: 137:371403

TITLE: Phosphorus-Containing Salts of  
Polyhexamethyleneguanidinium for Protection of Metals  
from Corrosion, Biological Overgrowing, and Salt  
Deposition

AUTHOR(S): Antonik, L. M.; Lopyrev, V. A.; Korchevin, N. A.;  
Tomin, V. P.

CORPORATE SOURCE: Siberian Division, Favorskii Institute of Chemistry,  
Russian Academy of Sciences, Irkutsk, Russia

SOURCE: Russian Journal of Applied Chemistry (Translation of  
Zhurnal Prikladnoi Khimii) (2002), 75(2), 257-260  
CODEN: RJACEO; ISSN: 1070-4272

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ST polyhexamethyleneguanidinium **phosphate** anticorrosive coating  
metal biol overgrowing **salt** deposition; bactericidal coating  
polyhexamethyleneguanidinium **phosphate**

IT 89697-78-9P, **Polyhexamethyleneguanidine phosphate**  
103728-45-6P, Guanidine carbonate-hexamethylenediamine copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or  
engineered material use); PREP (Preparation); USES (Uses)  
(prepn. and performance of polyhexamethyleneguanidinium **salts**  
for protection of metals from corrosion, biol. overgrowing, and  
**salt** deposition)

L11 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:492445 CAPLUS

DOCUMENT NUMBER: 137:326069

TITLE: method of preparing disinfecting agent with improved  
stability and reduced toxicity by hexamethylenediamine  
melt condensation with guanidine derivatives and  
product purification

INVENTOR(S): Lipovich, V. G.; Lipovich, T. V.; Sedishev, I. P.

PATENT ASSIGNEE(S): Polyanov, Oleg Mstislavovich, Russia; Petrochenko,  
Aleksandr Anatol'evich

SOURCE: Russ., No pp. given  
CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
RU 2170743	C1	20010720	RU 2000-107199	20000324
PRIORITY APPLN. INFO.:			RU 2000-107199	20000324
IT 1310-58-3, Potassium hydroxide, reactions			1310-73-2, Sodium hydroxide, reactions	
RL: RCT (Reactant); RACT (Reactant or reagent)				
(for <b>polyhexamethyleneguanidine</b> hydrochloride neutralization; method of prepg. disinfecting agent with improved stability and reduced toxicity by hexamethylenediamine melt condensation with guanidine derivs. and product purifn.)				
IT 7558-79-4, Disodium hydrophosphate		7558-80-7	7601-54-9, Sodium <b>phosphate</b>	7783-28-0
RL: RCT (Reactant); RACT (Reactant or reagent)				

(in **polyhexamethyleneguanidine** hydrochloride transformation to **phosphate**; method of prepg. disinfecting agent with improved stability and reduced toxicity by hexamethylenediamine melt condensation with guanidine **derivs.** and product purifn.)

L11 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:113105 CAPLUS  
DOCUMENT NUMBER: 136:162718  
TITLE: Poly(hexamethyleneguanidine) salt-containing  
antibacterial odorless detergents with reduced skin  
irritation for prevention of food poisoning  
INVENTOR(S): Son, Son Uon; Ju, Hong Shin; Kitamura, Koji; Tsuru,  
Takayuki; Suyama, Tomiyoshi  
PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K  
Corporation  
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2002047111	A2	20020212	JP 2000-258164	20000726
PRIORITY APPLN. INFO.:				JP 2000-258164	20000726
ST	antibacterial <b>polyhexamethyleneguanidine</b> detergent prevention food poisoning				
IT	89697-78-9, Poly(hexamethyleneguanidine) <b>phosphate</b> 141655-19-8				
	217642-56-3	393861-25-1	393861-26-2	394204-92-3	394204-94-5
	394204-97-8	394204-99-0	394205-04-0	394205-06-2	394205-07-3
	394205-11-9	397844-26-7			
RL:	BSU (Biological study, unclassified); BUU (Biological use, unclassified); NUU (Other use, unclassified); BIOL (Biological study); USES (Uses) (poly(hexamethyleneguanidine) <b>salt</b> -contg. antibacterial odorless detergents with reduced skin irritation for prevention of food poisoning)				

L11 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:98927 CAPLUS  
DOCUMENT NUMBER: 136:152628  
TITLE: Polyhexamethylene guanidine salt-treated antibacterial  
fiber  
INVENTOR(S): Son, Son Won; Ju, Hong Shin; Kitamura, Koji; Otsuki,  
Toru; Suyama, Tomiyoshi  
PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K  
Corporation  
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 2002038373	A2	20020206	JP 2000-258163	20000726
PRIORITY APPLN. INFO.:				JP 2000-258163	20000726
AB	The fiber is prepd. by treating a fiber with a <b>polyhexamethyleneguanidine salt</b> having formula of (C <sub>6</sub> H <sub>12</sub> NHC(NH)NH) <sub>n</sub> .A (n .gtoreq.1 integer; A = nitric acid, formic acid, acetic acid, benzoic acid, dehydroacetic acid, propionic acid, gluconic				

acid, sorbic acid, phosphoric acid, fumaric acid, maleic acid, carbonic acid, sulfuric acid, and p-toluenesulfonic acid). Thus, a fiber was prepd. by immersing a cotton fabric in a 0.25% aq. soln. of

**polyhexamethyleneguanidine phosphate** and drying.

ST **polyhexamethyleneguanidine phosphate** antibacterial fiber; acid **salt polyhexamethyleneguanidine** antibacterial agent

IT 89697-78-9, **Polyhexamethyleneguanidine phosphate**

141655-19-8 217642-56-3 393861-25-1 393861-26-2 394204-92-3

394204-94-5 394204-97-8 394204-99-0 394205-01-7 394205-04-0

394205-06-2 394205-07-3 394205-11-9

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(polyhexamethylene guanidine **salt**-treated antibacterial fiber)

L11 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:94188 CAPLUS

DOCUMENT NUMBER: 136:114233

TITLE: Preparation of antimicrobial wet wipers

INVENTOR(S): Son, Son Won; Ju, Hong Shin; Minemura, Kimie; Suyama, Tomiyoshi

PATENT ASSIGNEE(S): Daiwa Chemical Industries Co., Ltd., Japan; S K Corporation

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002034828	A2	20020205	JP 2000-258162	20000726

PRIORITY APPLN. INFO.: JP 2000-258162 20000726

AB Wet wipers are treated with poly(hexamethyleneguanidine) **salts** for control of bacteria and fungi. Nonwoven fabric was treated with an aq. soln. of poly(hexamethyleneguanidine) **phosphate**.

ST wiper bacteria fungi control **polyhexamethyleneguanidine salt**

L11 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:690131 CAPLUS

DOCUMENT NUMBER: 135:231426

TITLE: Method for disinfecting water from therapeutic and swimming pools

INVENTOR(S): Efimov, K. M.; Gembitskii, P. A.; Vointseva, I. I.; Zotova, V. I.

PATENT ASSIGNEE(S): Institut Ekhologo-Tekhnologicheskikh Problem, Russia

SOURCE: Russ., No pp. given

CODEN: RUXXE7

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2145307	C1	20000210	RU 1999-112325	19990618

PRIORITY APPLN. INFO.: RU 1999-112325 19990618

AB Disinfecting procedure involves treatment with (a)

**polyhexamethyleneguanidine phosphate salt**

formed in reaction of exchange decompn. of polyhexamethyleneguanidinium chloride with 40% aq. soln. of diammonium **phosphate**, or (b)

polyhexamethyleneguanidinium **phosphate**, or (c) **phosphate salt** of copolymers of **polyhexamethyleneguanidine** with higher monoamines. Flow- or recycle- type pool water is treated with above at 0.5-1.5 mg/L. In particular, recycle-type pool water is passed through layer of clinoptilolite treated with mentioned reagent to achieve its concn. 1-2%. Increased reliability of antiseptic protection of pool water and reduced toxicity of reagent including its allergic activity is obtained.

ST **polyhexamethyleneguanidine phosphate** swimming pool water disinfection

IT 31961-54-3D, **Polyhexamethyleneguanidine, phosphate salts**, copolymers with higher monoamines

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(method for disinfecting water from therapeutic and swimming pools)

L11 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:351312 CAPLUS

DOCUMENT NUMBER: 132:344445

TITLE: Synergistic biocidal composition.

INVENTOR(S): Choi, Ki-Seung; Kim, Jin-Man; Park, Jeong-Ho; Cho, Myung-Ho; Hahn, Soon-Jong

PATENT ASSIGNEE(S): SK Chemicals, S. Korea

SOURCE: PCT Int. Appl., 17 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000028823	A1	20000525	WO 1999-KR687	19991116
W: AU, CA, CN, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
KR 2000032593	A	20000615	KR 1998-49095	19981116
EP 1133231	A1	20010919	EP 1999-972072	19991116
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AU 751719	B2	20020822	AU 2000-11867	19991116
JP 2002529482	T2	20020910	JP 2000-581888	19991116
PRIORITY APPLN. INFO.:			KR 1998-49095 A	19981116
			WO 1999-KR687 W	19991116

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The title compn. comprises a 3-isothiazolone I (R = H or Cl) and **polyhexamethyleneguanidine phosphate** [(CH<sub>2</sub>)<sub>6</sub>NHC(:NH)NH]<sub>m</sub>.nH<sub>3</sub>PO<sub>4</sub> (m = 4-7; n = 1-14). The biocide compn. not only does not corrode metal, but also has a high instant sterilizing capability, a wide antibiotic spectrum, and superior antiseptic effects. It is usable as a biocide for cooling waters, paints, latexes, cosmetics, emulsions, textiles, leather metal processing fluids and paper industry.

ST synergism biocide isothiazolone **deriv**  
**polyhexamethyleneguanidine phosphate**

IT Algicides

Antibacterial agents  
Fungicides

(industrial, synergistic; compns. contg. isothiazolone **deriv.** and **polyhexamethyleneguanidine phosphate**)

IT Paper

(manuf.; microbicidal compns. contg. isothiazolone **deriv.** and **polyhexamethyleneguanidine phosphate** for)

IT Lubricating oils  
(metalworking; microbicidal treatment by compns. contg. isothiazolone  
**deriv. and polyhexamethyleneguanidine  
phosphate)**

IT Cooling water  
Cosmetics  
Emulsions  
Latex  
Paints  
Textiles  
(microbicidal treatment by compns. contg. isothiazolone **deriv  
. and polyhexamethyleneguanidine phosphate)**

IT Biocides  
(synergistic; compn. contg. isothiazolone **deriv. and  
polyhexamethyleneguanidine phosphate)**

IT 2682-20-4D, mixts. with **polyhexamethyleneguanidine phosphate**  
26172-55-4D, mixts. with **polyhexamethyleneguanidine phosphate**  
31961-54-3D, **Polyhexamethyleneguanidine, phosphates,**  
mixts. with isothiazolone **derivs.**  
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES  
(Uses)  
(synergistic biocidal compns.)

L11 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1986:200206 CAPLUS

DOCUMENT NUMBER: 104:200206

TITLE: **Polyhexamethyleneguanidine phosphate**  
injections with antitumor activity

INVENTOR(S): Lulle, I.; Lidaks, M.; Paegle, R.; Zidermane, A.;  
Kravchenko, I. M.; Gilev, A. P.; Kagan, T. I.;  
Gembitskii, P. A.; Simkhovich, B. Z.

PATENT ASSIGNEE(S): Institute of Organic Synthesis, Academy of Sciences,  
Latvian S.S.R., USSR

SOURCE: Can., 12 pp.  
CODEN: CAXXA4

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 1194802	A1	19851008	CA 1982-413032	19821007
PRIORITY APPLN. INFO.:			CA 1982-413032	19821007

TI **Polyhexamethyleneguanidine phosphate** injections with antitumor  
activity

AB **Polyhexamethyleneguanidine phosphate,**  
 $R(CH_2)_6[NHC(:NH)NH(CH_2)_6]_nR_1.(H_3PO_4)_{n+2}$ , [R, R1 = NH2, H2NC(:NH)NH; n =  
2-5], has antitumor activity and may be used for the treatment of  
gastrointestinal and mammary cancer. The compd. has an LD50 in mice of 70  
mg/kg, and inhibits the synthesis of DNA, RNA, and protein by tumor cells  
in vitro, probably by affecting transport of precursors. Equimolar amts.  
of hexamethyleneguanidine and guanidine-HCl were polymd. at  
160-170.degree. for 23 h to produce **polyhexamethyleneguanidine  
-HCl**, which was dissolved in EtOH, mixed with 1 equiv. NaOEt, NaCl was  
removed by filtration, and H3PO4 was added to the filtrate.  
**Polyhexamethyleneguanidine phosphate** was filtered, repptd. from aq  
EtOH, washed, and dried. The antitumor agent is preferably used in the  
form of 1.5% injections.

ST **polyhexamethyleneguanidine phosphate** antitumor

IT Neoplasm inhibitors  
(**polyhexamethyleneguanidine phosphate**)

IT 102265-78-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and conversion of, to **phosphate salt**)

=> d his full

(FILE 'HOME' ENTERED AT 11:47:58 ON 27 JUN 2003)

FILE 'REGISTRY' ENTERED AT 11:48:44 ON 27 JUN 2003

E 3-ISOTHIAZOLONE/CN

L1 1 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE/CN  
D L1

FILE 'CAPLUS' ENTERED AT 11:49:44 ON 27 JUN 2003

L2 251 SEA ABB=ON PLU=ON 3-ISOTHIAZOLONE

L3 313 SEA ABB=ON PLU=ON L1

FILE 'REGISTRY' ENTERED AT 11:50:25 ON 27 JUN 2003

E POLYHEXAMETHYLENEBIGUANIDINE/CN

E POLYHEXAMETHYLENEGUANIDINE/CN

L4 1 SEA ABB=ON PLU=ON POLYHEXAMETHYLENEGUANIDINE/CN  
D L4

FILE 'CAPLUS' ENTERED AT 11:51:28 ON 27 JUN 2003

L5 92 SEA ABB=ON PLU=ON L4

L6 1 SEA ABB=ON PLU=ON L4 (P) (PHOSPHATE OR PHOSPHORIC) (5A)  
SALT  
D L6 IBIB KWIC

L7 0 SEA ABB=ON PLU=ON L3 AND L5

L8 51 SEA ABB=ON PLU=ON (L3 OR L5) (P) (ANTIBACTERIAL OR BIOCIDAL  
OR BACTERICIDAL OR FUNGICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL  
OR ANTIMICROBIAL)

L9 4 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY  
OR ADDITIVE) (P) (L3 OR L5)

L10 10 SEA ABB=ON PLU=ON L8 AND (COMBINATION OR MIXTURE OR SYNERGY  
OR ADDITIVE) (P) (ANTIMICROBIAL OR ANTIBACTERIAL OR ANTIFUNGAL  
OR BIOCIDAL OR BACTERICIDAL OR ANTI-PROTOZOAL OR ANTI-ALGAL)  
D 10 IBIB KWIC 1-  
D L8 IBIB 1-

L11 11 SEA ABB=ON PLU=ON (POLYHEXAMETHYLENEGUANIDINE) AND (SALT OR  
DERIVATIVE) (P) (PHOSPHATE OR PHOSPHORIC OR PHOSPHOROUS)  
D L11 IBIB KWIC 1-

FILE 'REGISTRY' ENTERED AT 12:49:11 ON 27 JUN 2003

E ALEXIDINE

L12 6 SEA ABB=ON PLU=ON ALEXIDINE/BI  
D L12

E CHLORHEXIDINE

L13 45 SEA ABB=ON PLU=ON CHLORHEXIDINE/BI  
D L13

FILE 'CAPLUS' ENTERED AT 12:50:32 ON 27 JUN 2003

L14 100 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP  
ROPYLGUANIDE) (P) (PHOSPHATE OR PHOSPHORUS)

L15 93 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP  
ROPYLGUANIDE) (P) (PHOSPHATE)

L16 2 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP  
ROPYLGUANIDE) (5A) (PHOSPHATE) (5A) (SALT OR DERIVATIVE)  
D L16 IBIB KWIC 1-

L17 19 SEA ABB=ON PLU=ON (CHLORHEXIDINE OR ALEXICIDINE OR POLYAMINOP  
ROPYLGUANIDE) (5A) (PHOSPHATE)  
D L17 IBIB KWIC 1-